

M COM DEGREE END SEMESTER EXAMINATION 2014 -15
SEMESTER -1: COMMERCE
COURSE: P1COMT05: - QUANTITATIVE TECHNIQUES

Time: 3 hours

Max. Marks:75

Section A

(Answer **all** questions. Each question carries 2 marks)

1. Distinguish between statistics of attributes and statistics of variables.
2. What is Statistical modelling
3. What is sign test?
4. What do you mean by sampling error?
5. Properties (features) of Binomial Distribution
6. What are the uses of t test?
7. What is disassociation?
8. Define degree of freedom.
9. What is snowball sampling?
10. What is a control charts? Why is it used?

(10 x 2 = 20)

Section B

Answer **any five** questions

11. Write a note on the additive property of chi square.
12. Explain the law of statistical regularity and the law of inertia of large numbers.
13. Explain Yule's co-efficient of association.
14. Explain the use of p-charts and c-charts. When would you use one rather than the other? Give examples of measurements for both p-charts and c-charts.
15. Of the two salesmen, X claims that he has made larger sales than Y. For the accounts examined which were comparable for the two men, results were

	No. of sales	Average Size	SD
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x	10	6200	690
y	17	5600	600

Does this average size of sales figures differ significantly? Explain your result.

16. A sample survey result shows that out of 600 literate people 350 are employed whereas out of 500 illiterate people only 260 are employed. Would in your opinion still more sample surveys be able to depict the same difference between the proportion of person employed out of literate and illiterate persons?
17. Regarding a certain normal distribution concerning the income of the individuals we are given that mean is Rs 500 and standard deviation is Rs 100 .Find the probability that an individual selected at random will belong to income group a)Rs 550 to Rs 650 b)Rs 420 to Rs 570.
18. A company operates three shipping terminals a, b and c. terminals A,B and C handle approximately 60%, 30% and 10% respectively of the total cargo shipped, with error rates of 3%a, 4%b and 6%c. the company's internal auditor selects one shipping document ascertaining that this document contain error. What is the probability that the error occurred in terminal B
(5 x 5 = 25)

Section C

Answer any **two** questions

19. The opinion of 90 unmarried persons and 100 married persons were secured on an attitude scale. The data were collected as shown in the tabulated manner.

Marital status	Opinion			Total
	Agree	Disagree	No opinion	
Unmarried	14	66	10	90
Married	27	66	7	100
Total	41	132	17	190

Do the data indicate a significant difference in opinion in terms of marital status of the individuals?

20. In a research study, there were two experimental or independent variables: a seven member group of players and three coaches who were asked to rate the players in terms of a particular trait on a ten point scale. The data were recorded as under:

Rating by three coaches	Players						
	1	2	3	4	5	6	7
A	3	5	3	1	7	3	6
B	4	5	3	4	9	5	5
C	5	5	5	1	7	3	7

Apply the technique of analysis of variance for analyzing these data.

21. A psychologist is using a questionnaire measure of depression to help in diagnosing clients with depression. The manual for the questionnaire indicates that clients who score in the top 5% on the questionnaire fall in the "clinically depressed" range. The mean of all of scores on the questionnaire is 22 and the standard deviation of scores on the questionnaire is 5. What is the highest raw score that a client could get on the questionnaire and still not be considered to be clinically depressed?
22. Explain the role of QT in managerial decision making.
(2x 15 = 30)
